	ATGTCCTCGGCGCCGTCTCCGGGG	24
	M S S A P S P G	
25	ACTGGTTCGCCTCCATCTCCACCATCAAACTCCACAACCACCACCACTCCTC	84
	T G S P P S P P S N S T T T T P P P A S	
95	GCTCCTCCCCACCACCACCTTCTTCTCCTCCGCCGCCATCCACTATTCCGACATCTCCT	144
	APPPTTPSSPPPSTIPTSP	
145	GOTCCTTCTTCTCGCTCTACACCTTCTGCTCCTCCATCTCCACCAACTCCATCTACG	204
	P P S S R S T P S A P P P S P P T ,P S T	
205	CCGGGATCTCCACCTCCTCTCAGCCGTCTCCACCGGCTCCAACTACGCCGGATCT	264
	PGSPPLPQPSPPAPTTPGS	
265	CCACCCGCACCTGTTACTCCTCCTACTCGAAACCCTCCACCTTCAGTCCCAGGACCACCG	324
	P P A P V T P P T R N P P P S V P G P P	
325	TCCAATCCTTCACGCGAAGGAGGATCTCCTCGACCTCCATCTTCTCCCTCGCCGCCGTCT	384
	SNPSREGGSPRPPSSPPS	
385	CCTTCTTCCGACGGTTTATCAACAGGAGTGGTGGTGGGAATCGCCATCGGAGGAGTCGCT	444
	P S S D G L S T G V V V G I A I G G V A	
445	<u>CTGCTTGTGATAGTGACTCTGATTTGTCTCCTCTGT</u> AAGAAGAAACGACGGAGAGACGAA	504
	LLVIVTLICLLCKKKRRDE	
505	GAAGATGCTTACTATGTTCCTCCGCCACCTCCTCCTGGTCCCAAAGCCGGAGGACCTTAC	564
	EDAYYVPPPPPGPKAGGPY	
565	GGTGGACAGCAGCAACAATGGCGGCAACAAAACGCAACACCACCGTCAGATCATGTCGTG	624
	G G Q Q Q W R Q Q N A T P P S D H V V	٠
625	ACGTCACTACCACCACCACCTAAGGCTCCATCTCCACCACGGCAACCTCCTCCACCTCCA	684
	TSLPPPRAPSPPRQPPPP	
685	CCACCGCCTTTCATGAGCAGCAGCGGCGGCTCCGACTACTCGGACCGTCCAGTTCTTCCT	744
	PPPFMSSSGGSDYSDRPVLP	/ 11
745	CCACCGTCTCCAGGGCTTGTGTTAGGCTTCTCCAAAAGCACTTTCACATACGAGGAGCTA	804
	P P S P G L V L G F S K S T F T Y E E L	004
805	GCTAGAGCCACCAATGGTTTCTCCGAGGCGAACTTGTTAGGACAAGGCGGGTTCGGTTAC	964
	A R A T N ¹ G F S E A N L L G O G G E G V	864
865	A R A T N 'G F S E A N L L G Q G G F G Y GTGCACAAAGGTGTGTGTGCCTAGTGGGAAAGATTGCTGTGAAAGTTGAAAGTTGGG	024
	V H K G V L P S ¹¹ G K F V A V V O L V V G	924
925	W_H_K_G_V_L_P S 19_K_E_V_A_Y_K_Q_L_K_V_G AGTGGTCAGGGAGAGAGGGGTTCAGGCAGAGGTTGAGGAGATCATCAGCAGAGGTTCACCAC	0.04
	S_G IIIO G E R F F O A F V F T T G D V IVI	984
985	S_G IIIQ_G_E_E_E_E_E_O_A_E_Y_E_L_I_S_R_Y_IVH H AGGCATCTGGTGTCTTGTTGTTATTGCATCGCCGGTGCCAAAAGATTGCTTGTCTAT	1044
	R. H. L. Y. S. L. Y. G. Y. C. I. A. YG. A. K. R. L. L. Y. Y	1044
1045	GAGTTTGTTCCTAACAACAATCTCGAGGTTCACCTCCATGGCGAGGGACGGCCTACAATG	1104
	F. F. V. P. N. N. N. L. E. L. H. L. H. G. E. G. R. VIP. T. M	1104
1105	GAATGGAGCACCAGATTGAAGATTGCTCTTGGATCTGCTAAAGGACTTTCTTATCTTCAT	1164
	E. W.S.T. R. L. K. J. A. L. G. S. A. K. Q. L. S. Y. L. H	1164
1165	GAAGATTGCAATCCTAAAATCATTCACCGTGATATCAAGGCTTCAAACATATTGATAGAT	1224
	E_D_C_N P K I I H R D I K A S N I I 7 D	1224
1225	E_D_C_N_P_K_I_L_H_R_D_I_K_A_S_N_I_L_I_D TTCAAGTTTGAAGCTAAGGTTGCTAATTTGGTCTTGCTAAGATTGCTTCTGATACAAAC	1204
	F_K_F VIIE A K V A D F G [A K I A S D T V	1284
1285	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	1244
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345	AGCGGAAAGCTCACGGAGAAGTCTGACGTTTTCTCATTTGGCGTTGTGCTTTTGGAGCTC	1404
	S_G_K_L_T_E_K_S_D_Y_F_S_F_G_Y_V_L_L_E_L	1404
405	ATTACTGGACGTCGACCCGTTGATGCCAACAATGTCTATGTAGATGACAGCTTAGTTGAC	
	I I G R R P V D A N N XV Y V D D S L Y D	1464
465	TGGGCACGACCATTGCTTAACCGAGCATCTGAGCAAGGAGACTTTGAGGGTTTAGCTGAT	-,,,,
	W.A.R.P.L.L.N.R.A.S.E.Q.G.D.E.E.G.L.A.D	1524
525	GCAAAGATGAATAATGGGTATGACAGAGAGGAGGAGGTGGCTCGCATGGTTGCTTGC	1504
	A_K_M_N_N_G_Y_D_R_E * IE_M_A_B_M_V_A_C_A_a	1584
585	GCTTGTGTTCGCCATTCAGCTCGCCGCAGACCTCGCATGAGCCAGATTGTGCGTGC	
	A_C_V_B_H_S_A_R_B_R_P_B_M_S_Q_I_V_R_A_L	1644
645	GAAGGAAATGTATCACTGTCAGATCTTAACGAAGGGATGAGACCAGGTCAAAGCAATGTA	
	E A N V S I S D I V E S V B B F	1704
705	TACAGCTCATACGGAGGAAGCACCGATTATGACTCGAGCCAGTACAATGAAGACATGAAG	
	V C C V C C C D D	1764
765	AAGTTTAGGAAATGGCACTTGGAACTCAAGAGTACAACGCCACGGGTGAGTACAGTAAT	
	K F D V W A T G T O D W W I I D D D D D W W I I D D D D D D	1824
825	CCGACCAGTGACTATGGACTGTACCCGTCTGGTTCAAGCAGCGAGGGCCAAACCACACGC	1001
	PTCDVCTVDGGGGGG	1884
885	GANATGGAGATGGGGAAGATTAAGAGAACCGGTCAGGGTTATAGTGGACCTTCTCTTTAA	1044
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Figure 1A

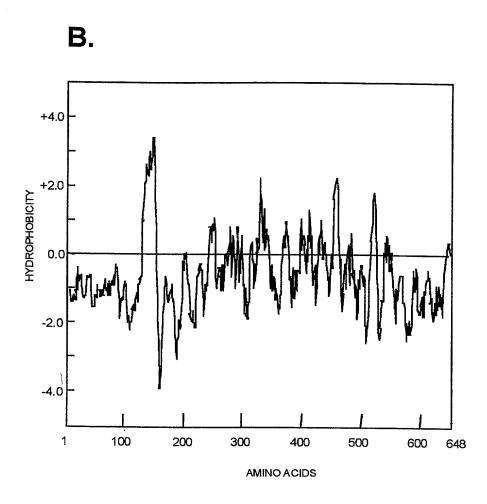




Figure1B

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265 C	CACCCG	CACCI	EGTT	ACTC	CTCC	TACT	CGAA	ACCCT	CCA	CTI	CAG	rccc	AGG	ACCA	CCG	324
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985 A	GGCATC	TGGTC	TCT(L	TGG.	TAT	TGCA	TCGCC	TDD:	3CCA	AAA	GATI R	GCT.	rgTC V	TAT Y	1044
985 A	GGCATC	TGGTC	TCT(L	TGG.	TAT	TGCA	TCGCC	TDD:	3CCA	AAA	GATI R	GCT.	rgTC V	TAT Y	1044
985 A	GGCATC R_H_ AGTITG E_F	L Y	S S SAACA	L \	TIGG: V G ATCTO	TTAT Y CGAG	TGCA CTTC.	TCGCC IA ACCTC H L	OGT(VQ CAT(H	GCA BGCG G	AAA K AGG	GATI R GACG	GCT.	TACA	TAT Y ATG	
985 A	GGCATC R_H_ AGTITG E_F	L Y	S S SAACA	L \	TIGG: V G ATCTO	TTAT Y CGAG	TGCA CTTC.	TCGCC IA ACCTC H L	OGT(VQ CAT(H	GCA BGCG G	AAA K AGG	GATI R GACG	GCT.	TACA	TAT Y ATG	1104
985 A 1045 G	GGCATC R_H AGTITG E_F AATGGA	TGGTC L Y TTCC1 V P	STOTO S TAACI N CAGAT	L V ACAI N N	TIGG G ATCTO N L AGAT	TTAT Y CGAG	TGCA CTTC. L	TCGCC L A ACCTC H L GATCT	GGT(VQ_ CAT(H_	G B B B B B B B B B B B B B B B B B B B	AAA K AGG E	GATI BACG BACG	GCT.	TACA	TATY ATGM CAT	
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1045 G	GGCATC R H AGTITG E F AATGGA E W AAGATT	TGGTG L Y TTCCT V P GCACG S T	S FAACI N CAGAT R CCTI	L YAACAJ TTGAJ L J	TTGG V G ATCTO N L AGAT K L	Y CGAG	TGCA CTTC. L CTTG L CGTG.	TCGCC L A ACCTC H L GATCT G S ATATC	PORTO CATO CATO CATO CATO CATO CATO CATO CA	GCA GCG AAAG K	AAA AGG E GAC Q	GATI R GACG GACG GACG GACA GACA GACA GACA GA	GCT. GCCT. G	TACA L GATA	TAT Y ATG B CAT H GAT	1104
1045 G. 1105 G. 1165 G	GGCATC R H AGTITG E F AATGGA E W AAGATT E D	TGGTG L Y TTCCT V P GCACG S T GCAAT	FAACI N CAGAT R CCCTI	L YAACAJ	Y G ATCTO N L AGAT K I	TTAT Y CGAG E TGCT A TCAC	TGCA CTTC. L CTTG L CGTG. R	TCGCC LA ACCTC HLL GATCT GATCT ATATC	POGTO CATO GCTA A CAAGO	G AAAG K BCTT	AAA AGG E GAC Q CAA	GATI R GACG G F IIIC L S ACAI	GCT. GCC. FTTA: ATTO	TACA TACT TACT TACT TACT TACT TACT TACT	TAT Y ATG M CAT H GAT D	1104 1164
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1045 d. 1105 d	GGCATC R H AGTITG E F AATGGA E W AAGATT E D TCAAGT F K CGCATG	TOGTO L Y PTTCCT V P GCACC S T GCAAT C N TTGAA E VII	S S S S S S S S S S S S S S S S S S S	L VACALINA N N N N N N N N N N N N N N N N N N	TTGG: V G ATCTO ATCTO AGAT: CAT: ITGG: V	CGAG E IGCT A ICAC H IGAT A IGAT	TGCA CTTC CTTG L CGTG R TTTG	TCGCC L A ACCTC H L GATCT G S ATATC GTCTT G [] TTGGG	GGTO GGTO A GGTO AAGO AAGO AAGO AAAGO AAAGO	GCA GGGG AAAG K GCTT A AAGA TTGG	AAA	GATI R GACG GACG L SACAT N L CTTC	GCT. GCC. GCC. TTAT. ATTC. TGAT.	TACA L BATA L TACA L GET TACA L GET TACA L T T T T T T T T T T T T T T T T T T	TAT Y ATGM CATH GATB AACN BCA	1104 1164 1224 1284
1045 d. 1105 d	GGCATC R H AGTITG E F AATGGA E W AAGATT E D TCAAGT F K CGCATG	TOGTO L Y PTTCCT V P GCACC S T GCAAT C N TTGAA E VII	S S S S S S S S S S S S S S S S S S S	L VACALINA N N N N N N N N N N N N N N N N N N	TTGG: V G ATCTO ATCTO AGAT: CAT: ITGG: V	CGAG E IGCT A ICAC H IGAT A IGAT	TGCA CTTC CTTG L CGTG R TTTG	TCGCC L A ACCTC H L GATCT G S ATATC GTCTT G [] TTGGG	GGTO GGTO A GGTO AAGO AAGO AAGO AAAGO AAAGO	GCA GGGG AAAG K GCTT A AAGA TTGG	AAA	GATI R GACG GACG L SACAT N L CTTC	GCT. GCC. GCC. TTAT. ATTC. TGAT.	TACA L BATA L TACA L GET TACA L GET TACA L T T T T T T T T T T T T T T T T T T	TAT Y ATGM CATH GATB AACN BCA	1104 1164 1224
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985 0. 1045 0. 1105 0.	GGCATC R H AGTITG E F AATGGA E W AAGATT E D TCAAGT TCAAGT TCAAGT TCAAGT TTACTG TTACTG TTACTG	TGGTC L Y FITCCI V P GCACC S I GCAAI C N TTGAA F VIII AGCTC K L GACGT	S S S S S S S S S S S S S S S S S S S	L \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	TTGGT AGAT V FGAT V FGAT V FGAT AGCG	TTAT Y CGAG E TGCT A TCAC H TGAT A TGAGA M G TGAC D TGAC A AGCA	TGCA C CTTC. L CTTG. L CGTG. R TTTG. ACCT V AACCA N N TCTG.	TCGCC L A ACCTC H L GATCT G S ATATC GTCTT GTCTT ACCTC	PER CONTROL OF THE CO	A AAGA K L TOG G G G G G G G G G G G G G G G G G G	AAAA K AAGG E GAC G G G G G G G G G G G G G G G G G G	R R R R R R R R R R R R R R R R R R R	GCT. GGCC. GGCC. YIE TTTAT ATTO S ATAC E TTTT TTTT TTTT TTTT TTTT TTTT TTTT	TACA L TACA TACA TACA TACA TACA TACA TAC	TAT Y ATG B CAT H GAT AAC IL GCA CTC L GAC GAC GAC GAT	1104 1164 1224 1284 1344 1404
985 0. 1045 0. 1105 0.	GGCATC R H AGTITG E F AATGGA E W AAGATT E D TCAAGT F K CGCATG I H GCGGAA S G ITACTG I T GGGCAC W A	TGGTC L Y P GCACC S T GCAAT C N TTGAA E VII TATCA Y VIII AGCTC K L GACGT G R GACCA R P	S S TAACA CA	L \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	TTGGT AGAT CGATC V CGATC V CGATC CGATC AGCC A	TTAT Y CGAG E TGCT A TCAC H TGAT A TGAT A TGAC	TGCA C CTTG. L CGTG. R TTTG. ACCT T AACCT AACCA N N TCTG. S	TCGCC A ACCTC A ACCTC G S G S G S G S G S G S G S G	PORTON	AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA	AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA	R R R R R R R R R R R R R R R R R R R	GCT. GGCC. GGCC. YIE TTTA: Y ATTO S ATAGE TTTO CTTA:	TGTC V TACA I TCTT L BATA I TACA I TA	TAT Y ATG CAT H GAT P AAC CIC GCA CTC L GAC GAC D GAT	1104 1164 1224 1284 1344 1404
985 0. 1045 0. 1105 0.	GGCATC R H AGTITG E F AATGGA E W AAGATT E D TCAAGT F K CGCATG I H GCGGAA S G ITACTG I T GGGCAC W A	TGGTC L Y P GCACC S T GCAAT C N TTGAA E VII TATCA Y VIII AGCTC K L GACGT G R GACCA R P	S S TAACA CA	L \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	TTGGT AGAT CGATC V CGATC V CGATC CGATC AGCC A	TTAT Y CGAG E TGCT A TCAC H TGAT A TGAT A TGAC	TGCA C CTTG. L CGTG. R TTTG. ACCT T AACCT AACCA N S	TCGCC A ACCTC A ACCTC G S G S G S G S G S G S G S G	PORTON	AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA	AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA	R R R R R R R R R R R R R R R R R R R	GCT. GGCC. GGCC. YIE TTTA: Y ATTO S ATAGE TTTO CTTA:	TGTC V TACA I TCTT L BATA I TACA I TA	TAT Y ATG CAT H GAT P AAC CIC GCA CTC L GAC GAC D GAT	1104 1164 1224 1284 1344 1404 1464
985 G. 1045 G. 1105 G.	GGCATC R H AGTITG E F AAATGGA E W AAAGATT E D TCAAGT F K CGCATG T H GCGGAA S G TTACTG	TOGTO L V P TTCCT V P GCACC S T TGCAAT C N TTGAA TATCA V VIII GACGT G R GACCA R P	S S J S S S S S S S S S S S S S S S S S	L 1	TTGGT AGAT TCAT TTGGT V TGAT AGAT TGAT T	TTAT Y CGAG E FGCT A TCAC H FGAT A FGAC FGAC B FGCC A AGCA A CAGGA A	TGCA CTTC. CTTG. L CTTG. L CTTG. TTTG. ACCT T GTTT V AACCA N N TCTG. S GGAGG.	TCGCC L A ACCTC H L GATCT G S ATATATC G S TCTCA F G S TCTCA ACCAA AGATG AGATG	PORTOR OF THE PO	AAAGA K TTGG L D JACTT AAAGA K TTGG J JACTT D CCGCA	AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA	R R R R R R R R R R R R R R R R R R R	GCT. GGCC. GGCC. TTA: YATTO SATAGE TTTT: TTTT: LTTTT: TTGT:	TACAA L TACAA TACAAA TACAAA TACAAA TACAAA TACAAA TACAAA TACAAA TACAAAA TACAAAA TACAAAAA TACAAAAAA TACAA	TAT Y ATG CAT H GAT O AAC CTC L GAC GAT GAC GAC GAC GAC GAC GAC	1104 1164 1224 1284 1344 1404
985 0. 1045 0. 1105 0. 1105 0. 1116 0. 116 0. 116 0. 116 0. 116 0. 116 0. 116 0. 116 0. 116 0. 116 0. 116 0. 116 0. 116 0. 116 0. 116	GGCATC R H AGTITG E F AAATGAA E W AAAGAT E D TCAAGT F K CGCATG I H GCGGAA S G TTACTG I T GGGGCAC GGGCAC AAAGAA A K	TOGTIC L Y PITTCCT V P GCACC S T GCAAT C N TTGAA E VII A AGCTC G R GACCA G R GACCA R F TGAA M N	S S S S S S S S S S S S S S S S S S S	L NAACAN NAACAN NA NAACAN NA NA NAACAN NA NA NAACAN NA N	TTGG: Y G ATCTG AGAT AGAT TTGAT TTGAT AGT AGT AGT AGT	TTAT Y COAG E TGCT A TCAC H TGAT A TGAC TGAC A TGAC A A TGAC A A A A CAGAA R	TGCA CTTC. CTTG. L CTTG. R R TTTG. ACCT T GTTT V AAACA N S SAAGG. E **	TCGCC A ACCTC H L GGATCT G S ATATCC F G TCTCA ATGTC N V AGCAA AGCAA E O AGATG E M AGATG E M AGATG E M AGATG E M	PORTON OF THE PO	AAAGA K ITGG G G G G G G G G G G G G G G G G G	AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA	R GATTI	GCT. L I GCC. GGCC. YIE GCC. TTAN ATTO ATTO CTTAN SATAO CTTAN TTTTO L TTTTO L TTTTO A CTTAN TTTTO	TACAA TACAAA TACAAA TACAAA TACAAA TACAAA TACAAA TACAAA TACAAAA TACAAAA TACAAAAA TA	TAT Y ATG B CAT H GAT GAT AAC CTC L GAC GAC GAC GAC GAC GAC GAC	1104 1164 1224 1284 1344 1404 1464 1524
985 G. 1045 G. 1105 G. 1105 G. 1116 S.	GGCATC R H AGTITG E F AAATGGA E W AAAGATT E D TCAAGT F K CGCATG I H GCGGAA S G TTACTG I T GGGCAC CAAAGA A K CTTGTG	TGGTC L Y PITCCT V P GCACC S T GCAAT C H TTGAA E VII AAGCTC K L GACGT G R GACCA R GACCA R TTGAAT M N TTCGC	S FAACION NO STANDARD NO STAND	L NAACAN N N N N N N N N N N N N N N N N	TTGG: GATCTG AGATCT AGATCT CATCAT LITGC CATCAT	TTAT Y CGAG E TGCT A TCAC H TGAT A TGAT A TGAC TGAC TGAC A	TGCA CTTGC CTTGC CTTGC R R TTTGG ACCTT V AAACA N TCTGG S AGACC AGACCA AC	TCGCC I A ACCTC H L GATCI G S ATATC G S TTGGG F G TTGGG T	CATCO	BCCA A BGCG G AAAAG K BGCTT AAGA K BGCG G BGCG BGCG BAACT D CGCA R AGCC	AAAA K AGG GAC GAC CCAAA TTGC A TTGC A TTGC A TTGC M AGAC	GATTI R GACG GACG GACG FITTO SACATI COTTO ACAGGA P GCTTO ACAGGA P GCTTO ACAGGA COTTO COGGA FITTO COGGA	GCT. L I I I I I I I I I I I I I I I I I I	TACA L TACA TACA	TAT Y ATG B CAT H GAT GAT AAC L GAA CTC L GAC GAC GAT GAT GAT GAT AAC GAT GAT	1104 1164 1224 1284 1344 1404 1464
985 G. 1045 G. 1105 G. 1116 S.	GGCATC R H AGTITG E F AATGGA E W AAAGATT E D TCAAGT F K CGCATG I H GCGGAA S G TTACTG I T GGGCAC CAAAGA A K CTTGTG A C	TGGTC L Y PTCCT Y P GGCACT S CLAS TTGAA TTGAA E YII TATCA Y YIII GACGT G L GACGT G R G R GACGT G R G R G R G R G R G R G R G R G R G R	FAACACACACACACACACACACACACACACACACACACA	L MACAMAN N N N N N N N N N N N N N N N N N N	TTGG G ATCTC G ACCAT L L L L L L L L L L L L L L L L L L	TTAT Y COAG E TGCT A TCAC H TGAT A TGAC A TGAC A A TGAC A A CAGA A A CCAGA R	TGCA C CTTGC CTTGC CTTGC R CGTGC R TTTGGTT V AACAT N TCTGC S AGACAC R	TCGCC I A ACCTC I A ACCTC I A ACCTC I A I A ACCTC I A I A I A ACCTC I A I A I A I A I A I A I A I A I A I A	CATCO YOUR CONTROL OF THE CONTROL OF	BCCA A BGCG G AAAGG K AGGCTT AAGA K FTGG G G BTAG BACT D CGCA R AGCC S	AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA	GATTI R GACG R GACG F TITC S ACAT C C GGA P TGCT C ACAG P TGCT C C C C C C C C C C C C C C C C C	GCT. L GGCC. ATTO S ATAC CTTA TITO L CTTA TITO CTTA TITO R GCGT R	TACA L TACA TACA	TAT ATG GAT BAAC L GAC CTC L GAC GAC GAC GAC TTA L TTA	1104 1164 1224 1284 1344 1404 1464 1524
985 G. 1045 G. 1105 G. 1116 S. 116 S. 116 S. 116 S. 116 S. 116	GGCATC R H AGTITG E F AATGGA E W AAGATT E D TCAAGT F K CGCATG I H GCGGAA S G ITACTG I T GGGCAC CAAGAA A K CTTGTG AAGGAA	TGGTC L Y PITCET Y P GGCACE GCAAT TTGAA E YIII TATCA Y VIII GACGT G G G G G G G G G G G G G G G G G G	FAACACE A COMMENT OF THE COMMENT OF	L MACAMAN N N N N N N N N N N N N N N N N N N	TTGG G ATCTC N L AGAT K L ITGG V ITGAT C AGT C AGT C AGT C AGT C AGT C AGT C AGG R AGG	TTAT Y COAG E TGCT A TCAC H TGAT A TGAC A TGAC A A TGAC A A TGAC A A TGAC A TGA	TGCA CTTC CTTG CTTG R R TTTG TTTG ACCT TTTG ACCT ACCT AAAAAAAAAA	TCGCC I A ACCTC	CONTROL OF THE PROPERTY OF THE	BCCA ABGCG AAAGA K BGCG BAACT BAACA K BGCG BACT BACT BAACA AGAC AGAC AGAC AGAC AGAC AGAC AGA	AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA	GATTI R GACGA FITTO ACATT ACAGA P TGCT V L ACAGGA P TGCT V L ACAGGA P TGCT V L TGT TGCT V L TGT TGCT V TGT TGCT V TGT TGCT V TGT TGCT V TGT TGCT TGC	GCT. L GGCCT. ATTO SATAC CTTA TTGT L TTGT L TTGT AAAGC	TACA JACA	TAT ATG GAT GAT GAC L GAC CTC L GAC GAC GAT GAT GAT GAT GAT GAT	1104 1164 1224 1284 1344 1404 1464 1524
985 G. 1045 G. 1105 G. 1105 G. 11105 G.	GGCATC R H AGTITG E F AATGGA E W AAGATT E D TCAAGT F K CGCATG I H GCGGAA S G TTACTG I T GGGCAC W AAGAT CAAGAA CAAGAA CAAGAA E G	TIGGTO L Y P TITCET Y P GCACO S GCAAN TIGAAN TIGAAN AGCTO G G G G G G G G G G G G G G G G G G G	FAACAC S COGACO AGCTA AGCTA E A AGCTA CCGACO AGCTA CCGACO AGCTA CCGACO AGCTA CCGACO AGCTA CCGACO AGCTA CCGACO CCGACO AGCTA A	L MACAMAN IN INTERNAL IN INTERNAL IN INTERNAL IN	TTGG: V G ATCTG V L AGAT K L ITTGCT ITTGCT V Y AGAT CATCAT	TTAT Y CGAG E TGCT A TCAC H TGAT A GGGAA A CAGAA A CAGAA CCCGC R TCTT L	TGCA CTTC. CTTG. CTTG. R. TTTGGTG. ACCTT AACCA N SGAGGCA R AACCA R AACCA R	TCGCC TC	YQ. CCATC H. CCCTA AAGC KAAGC KAAGC FTACT TATC GGAC AATGA ATGA M	BCCA ABGCG AAAGA K BGCG BACT D BACT AAGA K BGCG BACT AGCC AGCC AGCC AGCC AGCC AGCC AGCC A	AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA	GATTI R GACGGA L SACATI CTTC A CGGA P TGCT V L ACAGGA P TTGCT V L TGT TGCT V L TGT TGCT V TGT TGCT CGGA TGCT TGCT CGGA TGCT TGCT	CCTTA TOTAL L TOTAL L TOTAL TOT	TACA JACA	TAT Y ATG B CAT H GAT B CAT CAT GAA CTC GAA GAA	1104 1164 1224 1284 1344 1404 1464 1524 1584
985 G. 1045 G. 1105 G. 1105 G. 11105 G.	GGCATC R H AGTITG E F AATGGA E W AAGATT E D TCAAGT F K CGCATG I H GCGGAA S G TTACTG I T GGGCAC W AAGAT CAAGAA CAAGAA CAAGAA E G	TIGGTO L Y P TITCET Y P GCACO S GCAAN TIGAAN TIGAAN AGCTO G G G G G G G G G G G G G G G G G G G	FAACAC S COGACO AGCTA AGCTA E A AGCTA CCGACO AGCTA CCGACO AGCTA CCGACO AGCTA CCGACO AGCTA CCGACO AGCTA CCGACO CCGACO AGCTA A	L MACAMAN IN INTERNAL IN INTERNAL IN INTERNAL IN	TTGG: V G ATCTG V L AGAT K L ITTGCT ITTGCT V Y AGAT CATCAT	TTAT Y CGAG E TGCT A TCAC H TGAT A GGGAA A CAGAA A CAGAA CCCGC R TCTT L	TGCA CTTC. CTTG. CTTG. R. TTTGGTG. ACCTT AACCA N SGAGGCA R AACCA R AACCA R	TCGCC TC	YQ. CCATC H. CCCTA AAGC KAAGC KAAGC FTACT TATC GGAC AATGA ATGA M	BCCA ABGCG AAAGA K BGCG BACT D BACT AAGA K BGCG BACT AGCC AGCC AGCC AGCC AGCC AGCC AGCC A	AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA	GATTI R GACGGA L SACATI CTTC A CGGA P TGCT V L ACAGGA P TTGCT V L TGT TGCT V L TGT TGCT V TGT TGCT CGGA TGCT TGCT CGGA TGCT TGCT	CCTTA TOTAL L TOTAL L TOTAL TOT	TACA JACA	TAT Y ATG B CAT H GAT B CAT CAT GAA CTC GAA GAA	1104 1164 1224 1284 1344 1404 1464 1524 1584 1644
985 G. 1045 G. 1105 G.	GGCATC R H AGTITG E F AATGGA E W AAGATT E D TCAAGT F K CGCATG I H GCGGAA S G TTACTG I T GGGCAC W AAGAT CAAGAA CAAGAA CAAGAA E G	TIGGTO L Y P TITCET Y P GCACO G GCAAN TIGAA TIGAA Y VIII TATCA Y AGCCO K L GACCI G GACCI K T T T T T T T T T T T T T T T T T T	S TAACA N CAGATA R CCCTA R CCC	L AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA	TTGG: V G ATCTG V L AGATT CATT L L L L TTGAT CATT CATT CATT CATT CATT CATT CAT	TTAT Y CGAG E TGCT A TCAC TGAT A TGAC A AGCA A AGCA CCAGA R CCGC TCTT CCGAT	TGCA CTTC. CTTG. L CTTG. TTGGTT. ACCTT GTTT. V AACCA N AACCA N AACCA AACCA N TATGA	TCGCC I A ACCTC	YG. YG. YG. YG. H. GCTA AAAGG R. GCTA ATACT TTTT GGAG GGCT AATGA MAAGGG MAAGGA MAAGGG	JCCA A JGCG G AAAGG K JTGG JTAG JACT D AGCC R	AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA	GATT R GACAT ACAT ACAT ACAT P FIGOR ACAG ACAG	CTTA ATTO TTGA TTTA TTTGA TTTT CTTTA TTTT ATTO AAAG Q S AAAG AAAG	TGTC TACA TGTT TACA	TAT Y ATG B CAT B GAT B GAT CTC L GAC L GAC D GAT CTC L GAC L GAC CTC L GAC A A A A A A A A A A A A A A A A A A	1104 1164 1224 1284 1344 1404 1464 1524 1584
985 G. 11045 G. 1105 G. 11165 G. 1165 G. 1165 G. 1165 G. 1165 G. 1	GGCATC R H AGTITG E F AATGGA E W AAGATT E B TCAAGT F K CGCATG T H GCGGAA S G TTACTG I T GGGCAC W AA CTAGTG AA CTAGTG AA CAAAGAA E G ACAGCT Y S	TGGTC L Y PTGCATC S T TGGAAT TTGGAAT TATGA AGCTC G R GACCA GACCA GACCA TTGAAT M N TTGGAAT M' V CCATACC S Y	S I AACAC S I AA	L I I I I I I I I I I I I I I I I I I I	TTGG AGATT L AGATT CL TGATT CL T	TTAT Y CGAG E TGCT A TCAC H TGAT TGAC TGAC A A A A A A CGAC A A CCGC R TCTTI CGAT D	TGCA CTTC. CTTG. CTTG. R R TTTG ACCT T GTTT AAACA N ICTG SAAGC E AAACA AAACA N IATG Y ITTG T T T T T T T T T T T T T T T T T	TCGCC AACCTC BACCTC BACCT BACT BACCT BACT	PERSON NEW YORK NEW Y	GCA A BBCG G AAAG K FTGG G BBCG AAGA K FTGG CGCA AGCC CGCA CGCA	AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA	GATTI R GACAT GACAT LL S ACAT CCGGA P GCT ACAG ACAG P GCT CCGGA CC	GCT: VIEW CONTROL OF C	TOTO TACA	TAT X ATG B CAT H GAT ACIC CAC GAC GAC GAC GAC GAC GA	1104 1164 1224 1284 1344 1404 1464 1524 1584 1644 1704
985 G. 1045 G. 1105 G. 1105 G. 11105 G.	GGCATC R H AGTITG E F AATGGA E W AAGATT E D TCAAGT F K CGCATG T H GCGGAA S G TTACTG L T GGGCAC W AACAGT AACAGT AACAGT AACAGT Y S AGTITA	TGGTC L Y P GCACC S T TGGAA TTGGAA TTGGAA E VIII TATCA Y VIII GACGT G G G G G G G G G G G G G G G G G G	FAACACACACACACACACACACACACACACACACACACA	L I I I I I I I I I I I I I I I I I I I	TTGG: V G ATCTT AGAT K L AGAT K L ITTGC V TGAT C TGA	TTAT Y CGAG E TGCT A TCAC H TGAT TGAC TGAC A TGAC CGC A CAGCA CCGC C A CCGC A C	TGCA CTTC. CTTG. CTTG. R R R TTTG ACCT T GTTT AAACA N ITCTG SAAGAC R AAACA N ITCTG Y ITCTG T CTG T T T T T T T T T T T T T T T	TCGCC TC	GCT/AAAGCCAATGAAAAGCCSAAACGAAAAGCAAAAGAAAAGA	JCCA AAAGA K HTGG JCCA AAGAC K AAGAC K AAGAC C AGAC R CAGAC R	AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA	GATTI R GACAT L SACAT N I COTTO A COGGA P GACAG O GACAG I GACA	GCT. GGCC. YIE GCCC. YIE X ATTO TGAT S ATTO CTTA TTTO CTTA TTTO CTTA ATTO CTTA ATTO GCCC ATTO GCCC B AAGC GCCC GGTAC GGTAC GGTAC	TACA L T T T T T T T T T T T T T T T T T T	TAT ATG CAT GAT GAT GAT GAT GAT	1104 1164 1224 1284 1344 1404 1464 1524 1584 1644
985 G. 1105 G. 1105 G. 1116 G.	GGCATC R H AGTITG E F AATGGA E W AAGATT E D TCAAGT F K CGCATG I H GGGGA CGGA CTACTG I T GGGCAC W A CTTGTG A CTTGTG A CAAAGA E CTTGTG A CAAAGA A CTTGTA A CTT	TGGTC L Y TTGCT Y GCAAT C H TTGAA TTTGAA TTTGGC TTGAA TTTGAA TTTGGC TTGAA TTGGC TTGGC TTGGAA TTGGC TTGG	TACTO S TACAC N R TCCTI N AGCTI AGCTI AGCTI TCCGAC S T T T TCCGAC N T TCCAC N T T T T T T T T T T T T T T T T T T	L NACAN TOWN TOWN TOWN TOWN TOWN TOWN TOWN TOW	TTGG: Y G ATCTT Y G ATCTT Y L ITGG: Y L ITGGT	TTAT Y CGAG FIGOT A FIGOT	TGCA CTTGC CTTGC CTTGC R CTTGG R TTTGG ACCT T AACA ICTGG AACA ICTGG AAACA ICTGG AAACA ICTGG AAACA ICTGG AAACA ICTGG AAACA ICTGG ITTGG AAACA ICTGG AAACA ICTGGAAAACA ICTGAAAAACA ICTGAAAAAACA ICTGAAAAACAA ICTGAAAAAACAA ICTGAAAAAACAAAACAAAACAAAAACAAAAACAAAAACAAAAA	TCGCC I A ACCTC I A ACCTC I A ACCTC I A ACCTC I A I A ACCTC I A AC	GCTA A A A A A A A A A A A A A A A A A A	JCCA A AAAGA AAGA AAGA AAGA AAGA AAGA AA	AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA	GATT R GATT R GATT R GACAT STOCK ACAGA FETTO ACAGA ACA	GCT. L GGCC. YIE	TACA L T T T T T T T T T T T T T T T T T T	TAT Y ATG B CAT GAT GAT GAA CTC L GAA CTC L GAC GAA CTC L GAC GAA A A CTC A A A A CTC A A A A A A A	1104 1164 1224 1284 1344 1404 1464 1524 1584 1644 1704 1764
985 G. 1105 G. 1105 G. 1116 G.	GGCATC R H AGTITG E F AATGGA E W AAGATT E D TCAAGT F K CGCATG I H GGGCAC W A CTAGGA CAAAGA A K CTTGTG AAGGAA E G AACAGCT Y S AGTTTA K F CGACCA	TIGGTOC L Y TITCET Y GCAAT C H TIGAAA TITCAC Y GCACT GCAAT GCACT GCAAT GCACT GCAAT GCACT G	TACTO S TACAC N R CCGT/ R CCGT	L NACAN TOWN TOWN TOWN TOWN TOWN TOWN TOWN TOW	TTGG: Y G ATCTT Y G ATCTT Y L ITGG: Y L ITGGT	TTAT Y CGAG FIGOT A FIGOT	TGCA C CTTG CTTG CGTG R TITG CGTG ACCT T AACA T TCTG S AAACG R T T T T T T T T T T T T T T T T T T	TCGCCC I A ACCTC I A ACCTC I A ACCTC I A ACCTC I A I A I A I A I A I A I A I A I A I A	GCTA GCTA TTTC GGCTA AAGC GCTA TTTC GGCTA ATTACT GGCTA ATTACT GGCTA ATTACT GGCTA AAGC GCTA AAGC AACC AAGC AACC AAGC AACC AAGC AACC AAGC AAGC AAGC AAGC AAGC AACC AAGC AACC AAGC AACC A	JECAA AAGA AAGA AAGA JEGGGA AAGA AAGA AGGGA AGGGA AGGGA AGGGGA AGGGGGA AGGGGGA AGGGGGA AGGGGGA AGGGGGA AGGGGGA AGGGGGA AGGGGGG	AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA	GATTI R GACG GACG GACG A CCTIC A CCGGA A CCGGA GCG GCG GCG GCG GCG GC	GCT: L USGCC: VIE TTA: X ATTO TGAT S ATTA TTTT CCTT; TTTT; L TTTT; L TTTT; L TTTT; AAAGG Q S AGAG D GTAC GTAC GTAC GTAC AAACC	TOTC V TACA I TCIT I TACA	TAT X ATG B CAT B GAT B GAT CHA CTC GAA CTC GAA CTC GAA CTC GAA CTC AAA CTC CAA CTC CAA CTC CAA CCC CAA CCC	1104 1164 1224 1284 1344 1404 1464 1524 1584 1644 1704
985 G. 11045 G. 1105 G. 1106 G	GGCATC R H AGTITG E F AAAGGAT E W AAAGATT E W AAAGAT F K GCGCATG T H GCGGAT G T TACTG I H GCGGAC CAAAGA CTTGTG A C CAAAGA A K CTTGTG A C AAAGGAA E G ACAGCT Y S ACAGCT Y S ACAGCT Y S ACAGCT Y S ACAGCCA F T	TGGTG L Y PITCET V P TGCAAT C H TTGAAT K GACGT GACGT GACGT GACT K L GACGT GACGT GACGT M N TTGGC V R ATGTAAT M N TTGGC V R ATGTAAT M N TTGGC V R ATGTAA M N TTGGC V R ATGTAA M TTGGC V R ATGTA C G G G G G G G G G G G G G G G G G G	FAACAC FAACAC	L I I I I I I I I I I I I I I I I I I I	TTGG: Y G ATCTT Y G ATCTT Y I I I TTGC: Y TGATC Y TGAT	TTAT Y CGAG FGCT A FGCT FGAT A FGCC FGCC A A FGCC FGCC A A CCGGC CGAT CGAT CCCGT F	TGCA CTTC. CTTG. CTTG. CTTG. CTTG. TTTG. T	TCGCCC I A ACCTC	CONTROL OF THE CONTRO	JCCA A A B B B B B B B B B B B B B B B B	AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA	GATT R GACG GACG GACG L ST L	GCT: L L GGCC: TTA: X Y Y Y Y Y Y Y Y Y Y Y Y Y Y Y Y Y Y Y	TACA TACA TACA TACA TACA TACA TACA TACA	TAT ATG CAT GAT GAT GAA CTC GAA CTC GAA CTC GAA CTC GAA CTC CAA CTC C	1104 1164 1224 1284 1344 1404 1464 1524 1584 1644 1704 1764
985 G. 11045 G. 1106 G	GGCATC R H AGTITG E F AAATGGA E F AAATGGA E W AAGATT E W AAGATT F K GCGCATG I H GCGGAA G G TTACTG I T CAAAGA CTTGTG A C AAAGA A K CTTGTG A C AAGGAA E G ACAGCT Y S AAGGAA F T AAATGG	TIGGTOC L Y TITCET V P TITCET V P TITCET V P TITCET S TITCET C T T T T T T T T T T T T T T T T T	FARCIAN PARAMETERS SERVICE AND PARAMETERS SER	L MACAMANAMA AAAAAAAAAAAAAAAAAAAAAAAAAAAA	TTGG: Y G ATCTT Y G ATCTT Y AGAT Y TGAT TGGT TGG	TTAT Y CGAG F F F F F F F F F F F F F F F F F F	TGCA CTTC. CTTG. CTTG. CTTG. CTTG. CTTG. CTTG. TTTG. T	TCGCCC I A ACCTC	CONTROL OF THE CONTRO	JCCA A JGCG AAAG K JGCG AAAAG K JGGGCG AAAAG AAAAG AAAAG AAAAAAAAAAAAAA	AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA	GATT R GACG GACAT L SACAT COGGA P COGGA COGGA	GCT: L L GGCC: TTA: ATTA: TGAT SATA(CTT) L CTT) TTTI TTTI TTTI TTTI TTTI TTTI TTTI	TOTAL	TAT Y ATG CAT GAT GAT GAA CTC L GAC GAA CTC L GAC GAA CTC L GAC AAA CTC L GAC AAA CTC L GAC GAA AAA CTC AAG R AAA CTC CTC AA	1104 1164 1224 1284 1344 1404 1464 1524 1584 1644 1704 1764
985	GGCATC R H AGTITG F F AAATGA F F AAATGA F B CGCATG I H GCGGAA G G TTACTG I T CAAGT T CAAGT F K CAAGT F K CCGCATG CCGACA G CAAGA CCTTGTG AAC CCTTGTG AAC CCTTGTG AAC CCTTGTG AAC CCTTGTG AAC CCTGTGTG AAC CCTGTG AAC CCTGTGTG AAC CCTGTGT AAC	TIGGTOC L Y TITCET Y Y P TITCET Y Y P TITCET Y Y TITCET Y Y TITCET Y TITCET Y TITCET Y TITCET TITCET Y TITCET TITC	FARCION STATE OF THE STATE OF T	L I I I I I I I I I I I I I I I I I I I	TIGGE AGAT TIGGE AGAT TIGGE V TIGGE V TIGGE V TIGGE V TIGGE C AGAT C C C C C C C C C C C C C	TTAT Y CGAG F F F F F F F F F F F F F F F F F F	TGCA CTTC. CTTG. CTTG. CTTG. CTTG. TTTG. T	TCGCCC I A ACCTC I A ACCTC II A A	GCTA AAAGG GCTA TTATC GGAG AATGA AATGA AAGGA AATGA AAGGA GGTG AATGA AGGA GGTG AATGA AGGA GGTG AAGGA GGGTG GGGGGG	JECA A A A A C A C A A A A A A A A A A A	AAAA AGG GACC A TIGG TIGG A AGG CAAA CAAA CCAGG P ACAA CCAGG T CGG CGG CGG CGG CG	GATT R GACG GACG GACAT L ST L	GCT: L L GGCC: TTA: TTA: TTA: TTA: TTA: TTA: TTA: T	TOTO TACA TOTO BATA COTT CACA COTT CACA COTT CACA	TAT Y ATG CAT GAT GAT GAA CTC GAA CTC GAC GA	1104 1164 1224 1284 1344 1404 1464 1524 1584 1704 1764 1824
985	GGCATC R H AGTITG F F AAATGA F F AAATGA F B CGCATG I H GCGGAA G G TTACTG I T CAAGT T CAAGT F K CAAGT F K CCGCATG CCGACA G CAAGA CCTTGTG AAC CCTTGTG AAC CCTTGTG AAC CCTTGTG AAC CCTTGTG AAC CCTGTGTG AAC CCTGTG AAC CCTGTGTG AAC CCTGTGT AAC	TIGGTOC L Y TITCET Y Y P TITCET Y Y P TITCET Y Y TITCET Y Y TITCET Y TITCET Y TITCET Y TITCET TITCET Y TITCET TITC	FARCION STATE OF THE STATE OF T	L I I I I I I I I I I I I I I I I I I I	TIGGE AGAT TIGGE AGAT TIGGE V TIGGE V TIGGE V TIGGE V TIGGE C AGAT C C C C C C C C C C C C C	TTAT Y CGAG F F F F F F F F F F F F F F F F F F	TGCA CTTC. CTTG. CTTG. CTTG. CTTG. TTTG. T	TCGCCC I A ACCTC I A ACCTC II A A	GCTA AAAGG GCTA TTATC GGAG AATGA AATGA AAGGA AATGA AAGGA GGTG AATGA AGGA GGTG AATGA AGGA GGTG AAGGA GGGTG GGGGGG	JECA A A A A C A C A A A A A A A A A A A	AAAA AGG GACC A TIGG TIGG A AGG CAAA CAAA CCAGG P ACAA CCAGG T CGG CGG CGG CGG CG	GATT R GACG GACG GACAT COGA COG	GCT: L L GGCC: TTA: TTA: TTA: TTA: TTA: TTA: TTA: T	TOTO TACA TOTO BATA COTT CACA COTT CACA COTT CACA	TAT Y ATG CAT GAT GAT GAA CTC GAA CTC GAC GA	1104 1164 1224 1284 1344 1404 1464 1524 1584 1644 1704 1764 1824 1884
985 G. 11045 G. 1106 G	GGCATC R H AGTITG E F AAATGGA E W AAAGGAT E W AAAGGAT F K GCGCATG I H GCGGAA G TTACTG I T GGGCAC AAGGAA CTTGTG AAC AAGGAA E G ACAGCT Y S AGTTTA Y S AGTTTA Y S AGTTTA CGGACCA P T AAATGG E M CCGGACCA E M CCGGACCA CCGCGACCA CCGGACCA CCGCGACCA CCGCCCA CCGCCCCA CCGCCCCA CCGCCCCA CCCCCCCC	TIGGTOC L Y PTICET Y P TITCET Y P TITCET Y P TITCET Y P TITCET Y TITCET Y TITCET Y TITCET TIT	FARCACO S TO S	L I I I I I I I I I I I I I I I I I I I	TTGG: Y G ATCTT AGAT. TCAT: ITGC: Y TGATC: TGA	TTAT Y CGAG F F F F F F F F F F F F F F F F F F	TGCA CTTC. CTTG. L CTTG. L CTTG. TTTG TTTG TTTG TTTG TTTG TTTG TTT	TCGCC I A ACCTC	GCTA AAAGG FACT TATC GGAG GCTA AAAGG AAAAGG AAAAGG AAAAGG AAAAGG GCTA AAAAGG AAAAGG AAAAGG GCTA AAAAGG GCTA AAAAGG AAAAAGG AAAAGG AAAAGG AAAAGG AAAAGG AAAAGG AAAAGG AAAAGG AAAAGG AAAAAGG AAAAGG AAAAGG AAAAGG AAAAGG AAAAGG AAAAGG AAAAGG AAAAGG AAAAAGG AAAAGG AAAAAGG AAAAGG AAAAGG AAAAGG AAAAGG AAAAGG AAAAGG AAAAGG AAAAGG AAAAAGG AAAAGG AAAAGG AAAAGG AAAAGG AAAAAGG AAAAAGG AAAAAGG AAAAAGG AAAAAA	JECA A A A A A A A A A A A A A A A A A A	AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA	GATTI GACGG GACGGA GACGA GACGGA GACGGA GACGA GACGGA GACGA GACCA GACGA GACCA GACGA GACGA GACGA GACGA GACGA GACGA GACGA GACGA	GCT: L L GGCC: TTA: X Y Y Y Y Y Y Y Y Y Y Y Y Y Y Y Y Y Y Y	TOTO TACA TOTO BATA FACA GOTT COTT	TAT ATG CAT GAT GAT GAT GCA ACTC L GAC GAC GAC GAC GAC GAC GAC	1104 1164 1224 1284 1344 1404 1464 1524 1584 1704 1764 1824

10	20	30	40	50	60
TTAACTCTCT	GGTCTCCGTG	TCTCCTCTCT	TCTCCTGCTG	CTTCCTTTTA	
70	80	90	100	110	120
CATTTGCCTT	TTTGATTTAG		GCAGACT		
130	140	150	160	170	180
ACTGGTTCGC	CTCCATCTCC	ACCATCAAAC	TCCACAACCA	CCACTCCTCC	TCCAGCTTCC
190 GCTCCTCCTC	200	210	220	230	240
250	CCACCACACC 260	TTCTTCTCCT	CCGCCGCCAT	CCACTATTCC	GACATCTCCT
CCTCCTTCTT		270 ACCTTCTGCT	280	290	300
310	320	330	CCTCCTCCAT 340	CTCCACCAAC	TCCATCTACG
CCGGGATCTC	CACCTCCTCT	TCCTCAGCCG	TCTCCACCCG	350	360
370	380	390	400	CTCCAACTAC 410	GCCCGGATCT
CCACCCGCAC	CTGTTACTCC		AACCCTCCAC		420
430	440	450	460	CTTCAGTCCC 470	AGGACCACCG
TCCAATCCTT	CACGCGAAGG	AGGATCTCCT	CGACCTCCAT	CTTCTCCCTC	480 GCCGCCGTCT
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CCTTCTTCCG	ACGGTTTATC	AACAGGAGTG	GTGGTGGGAA		AGGAGTCGCT
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CTGCTTGTGA	TAGTGACTCT	GATTTGTCTC		AGAAACGACG	GAGAGACGAA
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GAAGATGCTT	ACTATGTTCC	TCCGCCACCT	CCTCCTGGTC		AGGACCTTAC
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# GCTAGAGCCA	CCAATGGTTT	CTCCGAGGCG	AACTTGTTAG	GACAAGGCGG	GTTCGGTTAC
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AGTGGTCAGG	GAGAGAGGA		GAGGTTGAGA	TCATCAGCAG	AGTTCACCAC
1090	1100	1110	1120	1130	1140
AGGCATCTGG	TGTCTCTTGT		ATCGCCGGTG		GCTTGTCTAT
1150	1160	1170	1180	1190	1200
GAGTTTGTTC	CTAACAACAA	TCTCGAGCTT	CACCTCCATG	GCGAGGGACG	GCCTACAATG
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1270	CCAGATTGAA		GGATCTGCTA		TTATCTTCAT
	1280	1290	1300	1310	1320
1330	ATCCTAAAAT 1340	1350			
	AAGCTAAGGT		1360	1370	1380
1390	1400	1410	1420		
	CAACACGTGT			1430	1440
1450	1460	1470	1480		
	TCACGGAGAA		т40V Т40V	1490	1500
1510	1520	1530	1540	1550	1560
1010	1020	1330	1240	1000	1200

Figure 1(d) (continued on next page)

```
ATTACTGGAC GTCGACCCGT TGATGCCAAC AATGTCTATG TAGATGACAG CTTAGTTGAC
       1570
              1580 1590 1600
                                             1610
 TGGGCACGAC CATTGCTTAA CCGAGCATCT GAGCAAGGAG ACTTTGAGGG TTTAGCTGAT
       1630
               1640 1650
                                    1660
                                             1670
 GCAAAGATGA ATAATGGGTA TGACAGAGAG GAGATGGCTC GCATGGTTGC TTGTGCTGCG
            1700 1710
      1690
                                   1720
                                             1730
 GCTTGTGTTC GCCATTCAGC TCGCCGCAGA CCTCGCATGA GCCAGATTGT GCGTGCGTTA
      17.50
             1760 1770
                                   1780
                                             1790
 GAAGGAAATG TATCACTGTC AGATCTTAAC GAAGGGATGA GACCAGGTCA AAGCAATGTA
      1810
              1820 1830
                                   1840
                                             1850
 TACAGCTCAT ACGGAGGAAG CACCGATTAT GACTCGAGCC AGTACAATGA AGACATGAAG
      1870 1880
                         1890
                                   1900
                                             1910
 AAGTTTAGGA AAATGGCACT TGGAACTCAA GAGTACAACG CCACGGGTGA GTACAGTAAT
      1930
               1940
                         1950
                                   1960
                                             1970
 CCGACCAGTG ACTATGGACT GTACCCGTCT GGTTCAAGCA GCGAGGGCCA AACCACACGC
      1990
                2000
                         2010
                                   2020
                                             2030
 GAAATGGAGA TGGGGAAGAT TAAGAGAACC GGTCAGGGTT ATAGTGGACC TTCTCTTTAA
      2050
                2060
                         2070
                                   2080
                                            2090
 ACCAGATGGG AGAGAAATTG AAGGGTGTTT TTTCATTATT TTTTTAAAAC TGTAAAGATA
      2110
           2120
                         2130 2140
                                             2150
 TGAGAAAATT GCCTTACTCT AATTAAAACC ACTACGATAT AAGGTTATAA TACGTTTTGA
     2170
                2180
                         2190
                                   2200
                                             2210
Figure 1(d) (continued)
     LTLWSPCLLS SPAASF*HSL HLPF*FRSKE ADMSSAPSPG TGSPPSPPSN STTTTPPPAS
     APPPTTPSSP PPPSTIPTSP PPSSRSTPSA PPPSPPTPST PGSPPPLPQP SPPAPTTPGS
     PPAPVTPPTR NPPPSVPGPP SNPSREGGSP RPPSSPSPPS PSSDGLSTGV VVGIAIGGVA
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     TSLPPPPKAP SPPRQPPPPP PPPFMSSSGG SDYSDRPVLP PPSPGLVLGF SKSTFTYEEL
     ARATNGFSEA NLLGQGGFGY VHKGVLPSGK EVAVKQLKVG SGQGEREFQA EVEIISRVHH
     RHLVSLVGYC IAGAKRLLVY EFVPNNNLEL HLHGEGRPTM EWSTRLKIAL GSAKGLSYLH
EDCNPKIIHR DIKASNILID FKFEAKVADF GLAKIASDTN THVSTRVMGT FGYLAPEYAA
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     AKMNNGYDRE EMARMVACAA ACVRHSARRR PRMSQIVRAL EGNVSLSDLN EGMRPGQSNV
     YSSYGGSTDY DSSQYNEDMK KFRKMALGTQ EYNATGEYSN PTSDYGLYPS GSSSEGQTTR
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     IGF*KKKKK
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Figure 1(e)

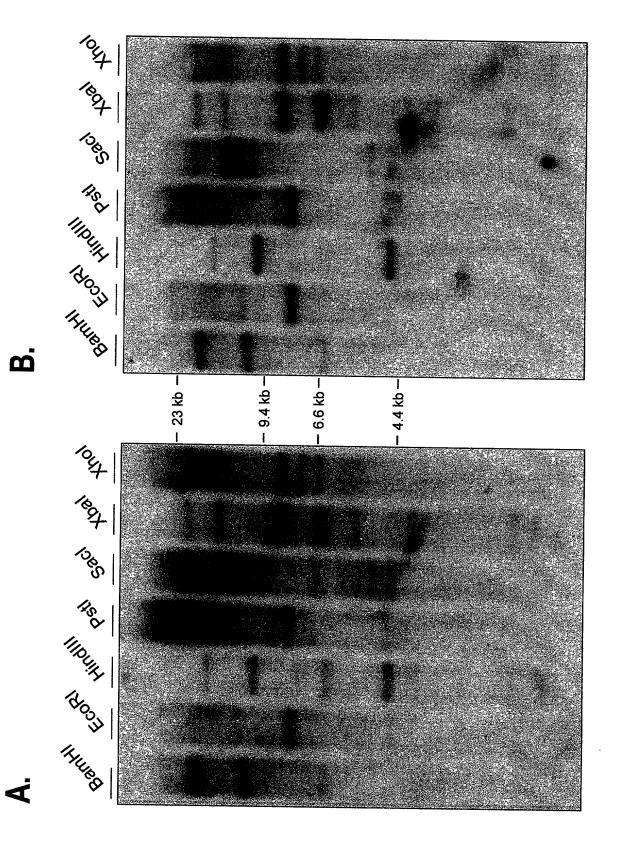


Figure 2

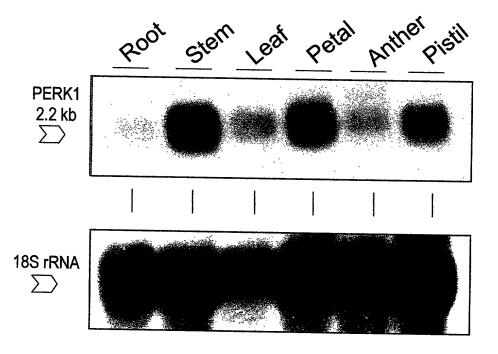


Figure 3

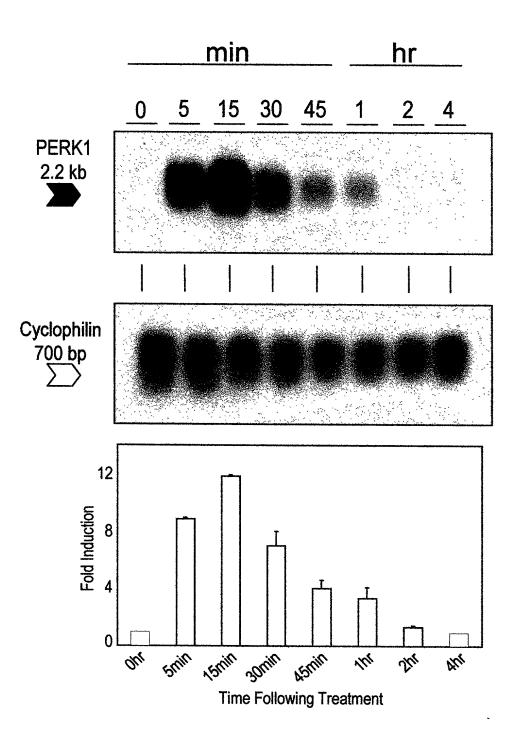


Figure 4A

B.

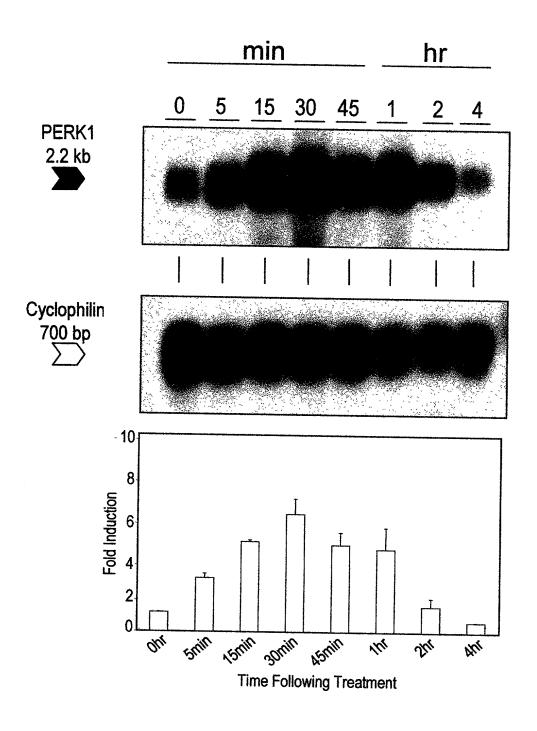


Figure 4B

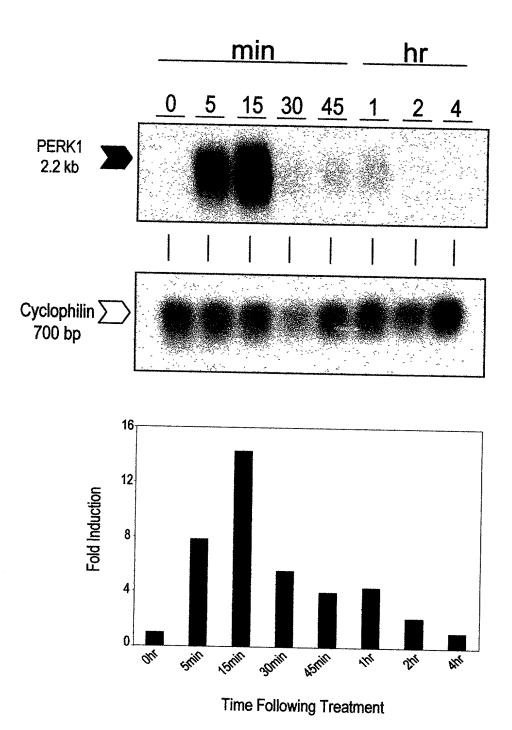


Figure 4a

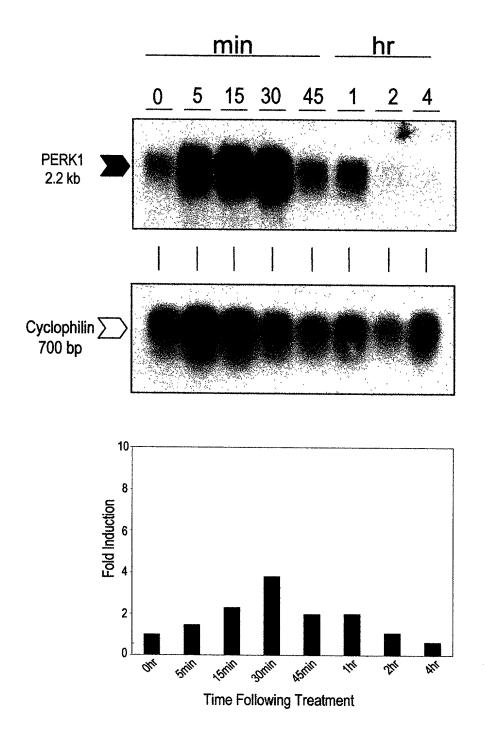


Figure 4b(A)

B.

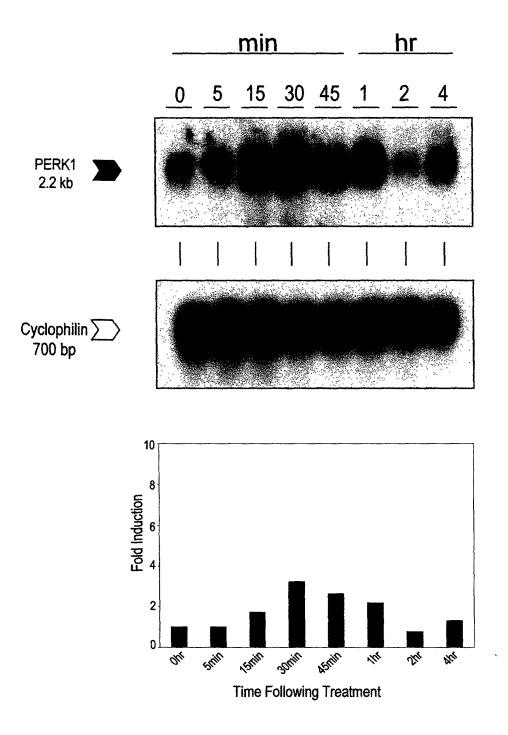


Figure 4b(B)

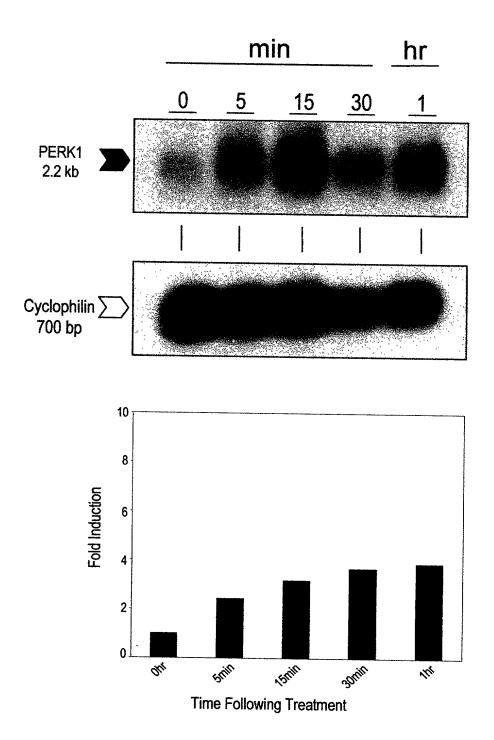
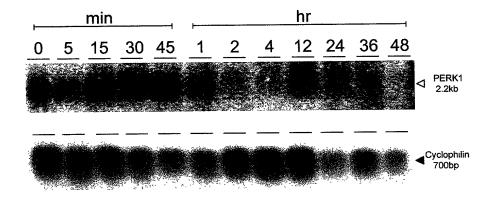


Figure 4c





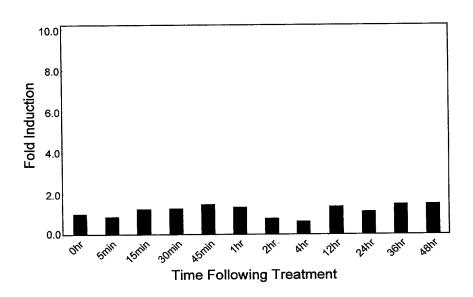
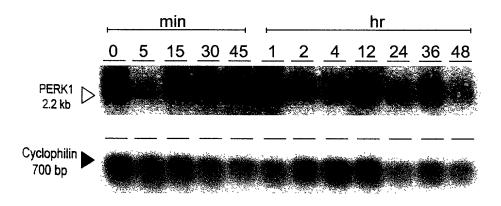


Figure 5A

B.



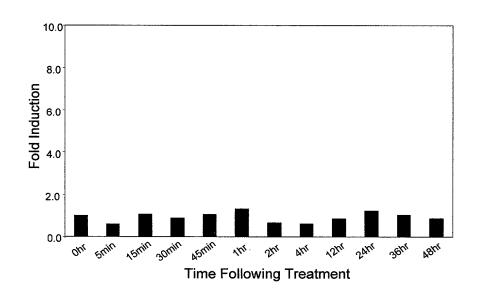
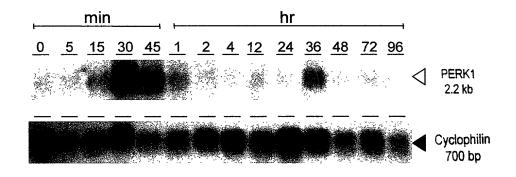


Figure 5B



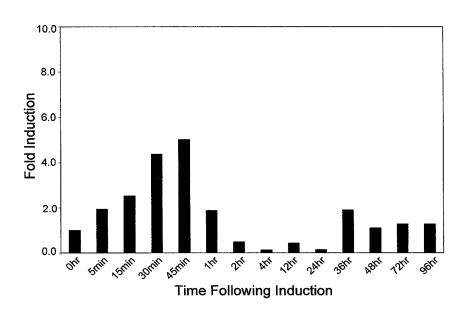
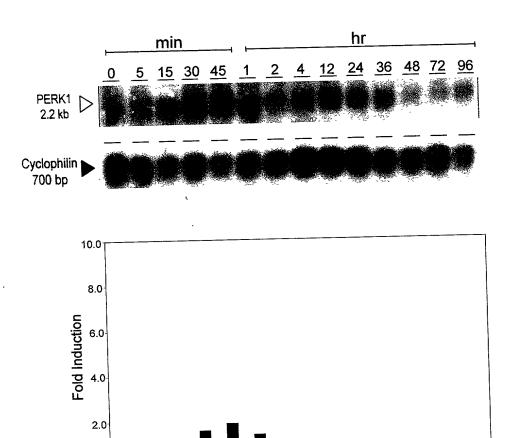


Figure 6A

В.

0.0

Ohr Smin Smin 30min 45min



Time Following Induction

Ahr 12hr 24hr 36hr

The Stat

48h 12h 96h

Figure 6B

• Fungal pathogen : Sclerotinia sclerotiorum

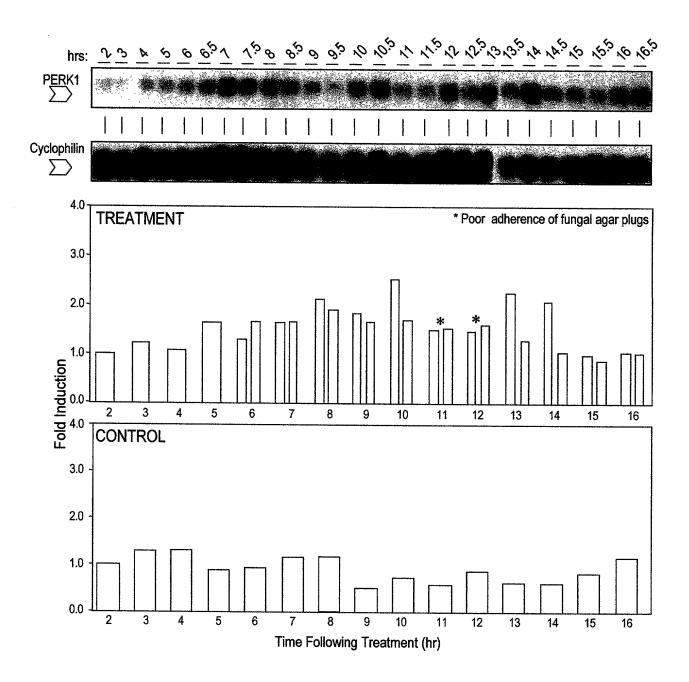


Figure 7

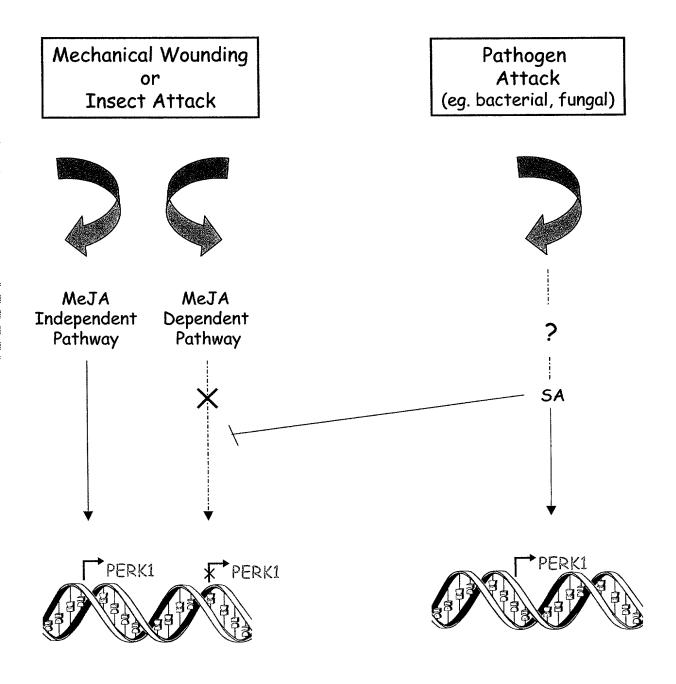


Figure 8

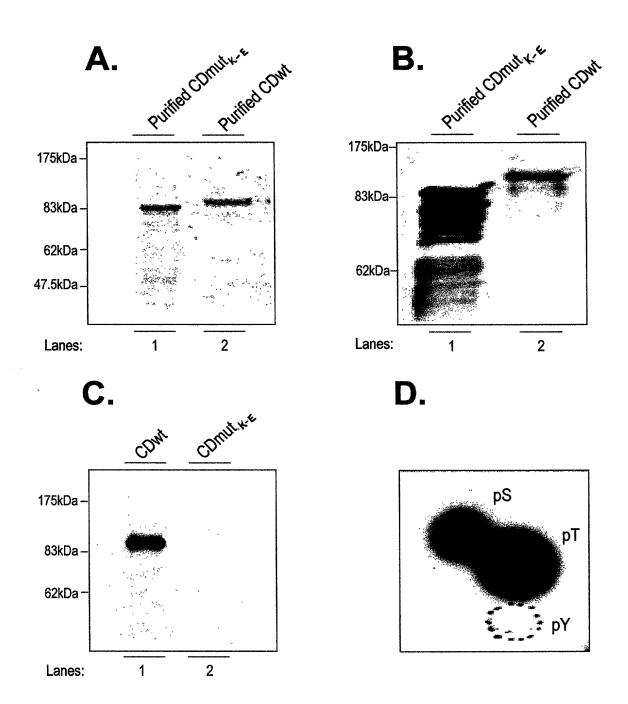
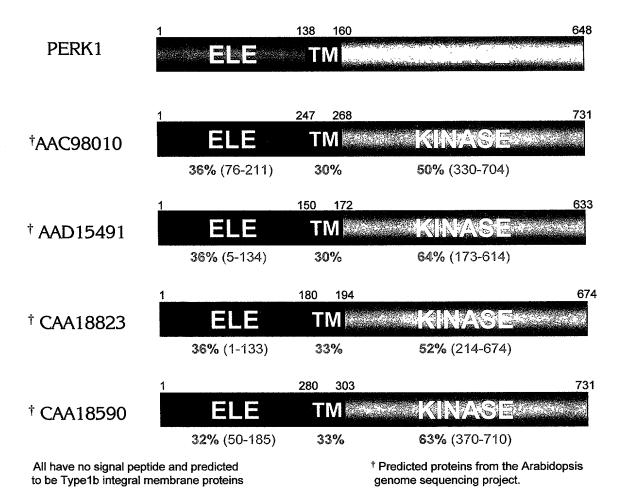


Figure 9



ELE: Extensin-like extracellular; TM: Transmembrane domain; Red = sequence identity to PERK1 domain

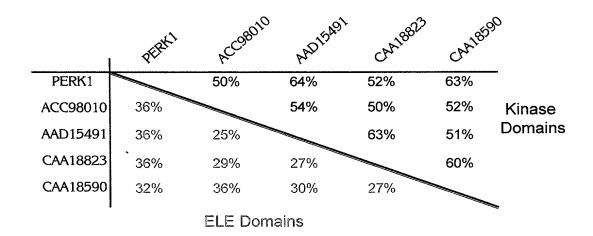


Figure 10

TAGAAAAAA AAAATGTCAG ACTTAGGCGA GTCGCCGAGT TCTTCACCAC CAGCACCACC AGCTGATACC GCTCCTCCAC CAGAGACTCC ATCAGAAAAC TCAGCTCTTC CACCTGTTGA TTCCTCTCT CCTAGTCCAC CAGCTGATTC ATCATCAACA CCGCCGCTGT CAGAACCATC CACTCCTCCT CCAGATTCAC AGCTTCCTCC TTTACCTTCG ATTCTTCCTC CGCTAACAGA TTCTCCACCT CCACCTTCCG ATTCTTCTCC ACCCGTTGAT TCAACCCCTT CTCCGCCGCC ACCGACGTCA AACGAATCTC CTTCTCCTCC AGAAGATTCC GAAACACCAC CTGCTCCACC AAATGAATCC AATGACAACA ACCCTCCTCC GTCTCAAGAT CTTCAATCGC CTCCTCCATC GTCGCCGTCG CCGAATGTAG GACCCACAAA CCCGGAATCA CCACCGTTAC AATCTCCTCC AGCTCCACCA GCATCAGATC CTACAAATTC ACCGCCAGCT TCACCATTAG ACCCTACCAA TCCTCCCCA ATACAACCAT CAGGACCAGC CACTTCTCCT CCGGCTAATC CCAACGCTCC GCCGAGCCCA TTCCCCACAG TACCACCCAA AACTCCTTCT AGTGGACCTG TGGTGTCTCC ATCTCTCACA TCCCCTAGTA AAGGAACTCC TACTCCAAAC CAAGGCAATG GAGATGGCGG TGGCGGTGGT GGCGGCTATC AAGGGAAGAC TATGGTTGGT ATGGCTGTAG CCGGTTTCGC AATCATGGCG CTTATAGGCG TTGTGTTCTT AGTGAGAAGA AAGAAAAAGA GAAACATTGA TAGCTATAAT CACTCACAGT ACTTGCCACA TCCCAATTTC TCTGTTAAAT CAGGTTTAAA AATCTCACCT TTATCTCTCT CTGATCATCT TCTATGTGCT TGAATCATCT CTCTGACTAT CTTTGCTTTT GATGTAGATG GATTCTTATA CGGTCAAGAT CCAGGTAAAG GATACTCCTC TGGTCCTAAT GGTTCAATGT ATAACAATTC ACAGCAACAA CAATCCTCTA TGGGAAACAG TTATGGTACA GCTGGTGGTG GTTATCCTCA TCATCAAATG CAATCAAGTG GCACACCTGA CTCTGCTATA CTCGGAAGTG GCCAGACTCA TTTCAGTTAC GAAGAGCTTG CTGAGATAAC ACAAGGCTTT GCTCGCAAAA ACATTCTTGG AGAAGGCGGA TTTGGATGTG TCTATAAAGG TACATTGCAG GATGGTAAAG TTGTTGCGGT TAAGCAGCTT AAAGCTGGAA GTGGACAAGG TGACCGTGAA TTCAAAGCAG AGGTTGAGAT CATCAGCCGC GTTCATCATC GCCATTTGGT CTCTCTGGTT GGTTACTGCA TTTCAGACCA GCATAGATTG CTTATCTATG AGTATGTTTC TAATCAAACC TTGGAGCATC ATTTGCATGG TGAGTGACTT GTTACCATTT TCGTTATAGA TAAGACTTTT TTTTAGCTTT ACGTGTTAGA CTGACTCGCT TTACGCTTTA GGAAAGGGTT TGCCAGTTTT AGAGTGGTCT AAGAGAGTCC GGATCGCTAT AGGATCAGCC AAAGGGTTGG CATATCTTCA CGAAGACTGT AAGTAATGCC TTCACATTTT CTTAGTTGTG TGCTTTGGTT ATGCACTTCA TAGTTTAAAC AGAAGCCAAA AATCATATCC TTGTTTTATT TTACAGGTCA TCCGAAAATC ATTCACAGAG ATATAAAGTC AGCAAATATT CTTCTAGATG ATGAATATGA AGCTCAGGCA ATAATGAAAT CCTCCTTTTC GTTAAATCTA TCTTATGACT GTAAAGTTTT AGTTAATGAG ACTTGTTCTG TTTTTTGGAT GTTTAGGTTG CTGATTTTGG ACTTGCTAGA CTCAATGATA CAACACAAAC TCATGTTTCA ACTCGGGTTA TGGGAACCTT CGGGTAAGCA AACATTCATC ACAAACTCTA CTCCAAAACT GGACCTTATT GATCCAATGC CTGATGAAAA GTTTGTTATA TATGGCTTGA GGCAACAAAT TGGATCAAAC CTGAATCTTT ATTGATCGTA TGGCTGCATG ACATGTTTTG TGTTAAGGTA CCTAGCGCCG GAATATGCAT CAAGTGGAAA ATTGACTGAT AGATCCGATG TATTCTCATT CGGGGTTGTT CTCTTAGAGC TTGTAACTGG ACGGAAACCA GTTGACCAGA CTCAGCCTCT AGGAGAAGAG AGTTTGGTTG AATGGGTAAG AATCCAACTT TCAAACATTC TTCAATAATA GTAAGATTGG CCCTAGTATA CTTATATAGT ACTTATAAAT GAACTCACAG GCGCCCCGC TGCTTCTCAA AGCCATTGAG ACCGGAGATT TAAGCGAACT GATTGATACA CGGCTTGAAA AGCGTTATGT GGAGCATGAA GTCTTCAGAA TGATCGAGAC AGCCGCTGCA TGTGTTAGAC ATTCTGGTCC AAAACGCCCA CGCATGGTTC <u>AG</u>GTAATTCT GACTAACCAA AAGTCCAAAG CTCCCATATA TAGTAACAAG TGATTTCTCA CATCTGAAAA CTTATCTACT CTTCGAAATA AGGTTGTGAG AGCATTGGAC TGCGACGGAG ACTCGGGAGA TATTAGCAAC GGAATCAAAA TTGGGCAAAG CACAACTTAT GACTCAGGGC AATACAATGA AGACATTATG AAATTCAGGA AAATGGCGTT TGGTGGTGAT AACAGCGTAG AGTCAGGATT GTACAGTGGA AACTACTCTG CCAAAAGCTC TTCAGATTTC TCAGGGAATG AATCTGAGAC TCGGCCTTTC AACAACCGAC GGTTCTGATC ATACAATAGG TGAAAGTAAC

SDLGESPSSSPP ATG TCA GAC TTA GGC GAG TCG CCG AGT TCT TCA CCA CCA GCA CCA CCA GCT GAT ACC GCT 60 E N S A 40 CCT CCA CCA GAG ACT CCA TCA GAA AAC TCA GCT CTT CCA CCT GTT GAT TCC TCT CCT CCT 120 D S S S T P P L S E P S T P P AGT CCA CCA GCT GAT TCA TCA ACA CCG CCG CTG TCA GAA CCA TCC ACT CCT CCA 180 S P T. Þ GAT TOA CAG OTT COT COT TTA COT TOG ATT CTT COT COG CTA ACA GAT TOT COA COT COA 240 S D S S P P V D S T P S P P P T S 100 241 CCT TOO GAT TOT TOT COA CCC GTT GAT TOA ACC CCT TOT CCG CCG CCA CCG ACG TOA AAC 300 S Ε D S е т Р P P N 120 301 GAA TOT COT TOT COT COA GAA GAT TOO GAA ACA COA COT GOT COA COA AAT GAA TOO AAT 360 121 N N P P P S ODLQS P P P S S P S 140 361 GAC AAC AAC CCT CCT CCG TCT CAA GAT CTT CAA TCG CCT CCT CCA TCG TCG CCG TCG CCG 420 P 160 L 0 421 AAT GTA GGA CCC ACA AAC CCG GAA TCA CCA CCG TTA CAA TCT CCT CCA GCT CCA CCA GCA 480 161 TNSP S P D P Р A L D P T N P p p 180 TCA GAT CCT ACA AAT TCA CCG CCA GCT TCA CCA TTA GAC CCT ACC AAT CCT CCC CCA ATA 481 540 G A N 9 N 200 P S 541 CAA CCA TCA GGA CCA GCC ACT TCT CCT CCG GCT AAT CCC AAC GCT CCG CCG AGC CCA TTC 600 PPKTPSS G P v v s p S L T 220 601 CCC ACA GTA CCA CCC AAA ACT CCT TCT AGT GGA CCT GTG GTG TCT CCA TCT CTC ACA TCC 660 G P N 0 G N G D 240 CCT AGT AAA GGA ACT CCT ACT CCA AAC CAA GGC AAT GGA GAT GGC GGT GGC GGT GGC 720 QGKT V Α 260 GGC TAT CAA GGG AAG ACT ATG GTT GGT ATG GCT GTA GCC GGT TTC GCA ATC ATG GCG CTT 780 ĸ ĸ R N D 280 ATA GGC GTT GTG TTC TTA GTG AGA AGA AAG AAA AAG AGA AAC ATT GAT AGC TAT AAT CAC 840 L рнри F S v ĸ S D G F 300 TCA CAG TAC TTG CCA CAT CCC AAT TTC TCT GTT AAA TCA GAT GGA TTC TTA TAC GGT CAA 900 320 G G N G 901 GAT CCA GGT AAA GGA TAC TCC TCT GGT CCT AAT GGT TCA ATG TAT AAC AAT TCA CAG CAA 960 321 Q Q S S 340 M G N S Y G A G G G CAA CAA TCC TCT ATG GGA AAC AGT TAT GGT ACA GCT GGT GGT GGT TAT CCT CAT CAA 961 1020 341 G 360 D S G S G 1021 ATG CAA TCA AGT GGC ACA CCT GAC TCT GCT ATA CTC GGA AGT GGC CAG ACT CAT TTC AGT 1080 361 E L A EIT OGF R K N 380 1081 TAC GAA GAG CTT GCT GAG ATA ACA CAA GGC TTT GCT CGC AAA AAC ATT CTT GGA GAA GGC 1140 381 G 400 1141 GGA TIT GGA TGT GTC TAT AAA GGT ACA TTG CAG GAT GGT AAA GTT GTT GCG GTT AAG CAG 1200 401 QGDREFKAE G 420 1201 CTT AAA GCT GGA AGT GGA CAA GGT GAC CGT GAA TTC AAA GCA GAG GTT GAG ATC ATC AGC 1260 421 v 1261 CGC GTT CAT CAT CGC CAT TTG GTC TCT CTG GTT GGT TAC TGC ATT TCA GAC CAG CAT AGA 441 1321 TTG CTT ATC TAT GAG TAT GTT TCT AAT CAA ACC TTG GAG CAT CAT TTG CAT GAG TGG TCT 1380 461 R V. 480 1381 AAG AGA GTC CGG ATC GCT ATA GGA TCA GCC AAA GGG TTG GCA TAT CTT CAC GAA GAC TGT 1440 481 Р K I I H R D LLD 500 1441 CAT CCG AAA ATC ATT CAC AGA GAT ATA AAG TCA GCA AAT ATT CTT CTA GAT GAT GAA TAT 1500 501 Ε Α 520 1501 GAA GCT CAG GCA ATA ATG AAA TCC TCC TTT TCG TTA AAT CTA TCT TAT GAC TGT AAA GTT 1560 521 G A D H 540 TTA GTT GCT GAT TTT GGA CTT GCT AGA CTC AAT GAT ACA ACA CAA ACT CAT GTT TCA ACT 1620 М G т F G E Α S 560 L Α CGG GTT ATG GGA ACC TTC GGG TAC CTA GCG CCG GAA TAT GCA TCA AGT GGA AAA TTG ACT 1680 D V F s F G v v L L E G 580 GAT AGA TCC GAT GTA TTC TCA TTC GGG GTT GTT CTC TTA GAG CTT GTA ACT GGA CGG AAA 1740 D 0 v T 0 P L G E Ε S 600 1741 CCA GTT GAC CAG ACT CAG CCT CTA GGA GAA GAG AGT TTG GTT GAA TGG GCG CGC CCG CTG 1800 601 Ε G D S E D 620 1801 CTT CTC AAA GCC ATT GAG ACC GGA GAT TTA AGC GAA CTG ATT GAT ACA CGG CTT GAA AAG 1860 621 H E v F E T 640 R M A 1861 CGT TAT GTG GAG CAT GAA GTC TTC AGA ATG ATC GAG ACA GCC GCT GCA TGT GTT AGA CAT 1920 641 660 R P R М 1921 TCT GGT CCA AAA CGC CCA CGC ATG GTT CAG GTT GTG AGA GCA TTG GAC TGC GAC GGA GAC 1980 661 G G 0 ĸ 1981 TCG GGA GAT ATT AGC AAC GGA ATC AAA ATT GGG CAA AGC ACA ACT TAT GAC TCA GGG CAA 2040 681 700 М Α 2041 TAC AAT GAA GAC ATT ATG AAA TTC AGG AAA ATG GCG TTT GGT GGT GAT AAC AGC GTA GAG 2100 701 S G L 720 G N K S S S D F S G N E A 2101 TCA GGA TTG TAC AGT GGA AAC TAC TCT GCC AAA AGC TCT TCA GAT TTC TCA GGG AAT GAA 2160 721 732 2161 TCT GAG ACT CGG CCT TTC AAC AAC CGA CGG TTC TGA 2196

Figure 11B

GAAAATTTTG ATCTCCGATG GCTTCTTCTC CTGAATCTGC TCCTCCAACA AACTCCACCT CTTCTCCATC TCCACCGTCT AATACCAATT CAACCACCTC TTCTCCGCCG GCTCCGTCTC CTCCTTCTCC TACACCTCCT CAAGGAGACT CATCATCATC GCCACCTCCT GATTCCACAT CTCCACCAGC TCCACAAGCT CCTAACCCTC CTAATTCCTC TAATAACTCT CCTTCCCCTC CGTCACAGGG CGGTGGAGGA GAAAGAGGAA ATGGAGGAAA CAATGGTGGC AATGATACTC CACCGTCACG CGGCTCTCCT CCTTCTCCTC CTTCTAGGAG TAATGGAGAT AATGGTGGTA GCAGATCATC GCCACCAGGA GACACTGGAG GCTCTCGCTC AGACAACCCT CCTTCTAGCG GAGGAAGCAG TGGAGGAGGT GGAGGTGGAA GAAGTAATAC GAATACAGCG ATCATAGTTG GTGTATTAGT CGGAGCTGGA CTTTTGATGA TCGTTCTTAT TATTGTGTGT CTTAGACGCA AAAAGAAGAG AAAAGACTCC TTCTACCCTG AACCCATGAA AGGTAAAAAC ATATACACAC TCTTATGTTT CAACAAATAA GAAGCTTAGA TTCTTTCATA AAATTTCAGG AAACCAATAT CAATACTATG GAAACAACAA CAACAACAAT GCTTCACAGA ATTATCCGAA TTGGCACCTA AATTCACAAG GCCAAAACCA ACAATCTACT GGTGGTTGGG GAGGCGGTGG ACCATCACCG CCTCCTCCTC CGCGGATGCC TACAAGCGGA GAAGATTCTT CCATGTACTC AGGCCCATCA CGCCCAGTTT TACCTCCTCC TTCGCCTGCT CTAGCCCTCG GATTCAACAA GAGCACTTTT ACTTACCAAG AGCTTGCGGC TGCAACAGGA GGGTTTACGG ATGCTAACCT TTTGGGACAG GGAGGATTTG GGTATGTCCA TAAAGGAGTC TTGCCTAGCG GGAAAGAAGT AGCAGTTAAG AGTTTAAAAG CGGGTAGCGG ACAAGGAGAG AGGGAGTTTC AAGCTGAGGT CGATATCATT AGCCGTGTGC ATCATCGGTA TCTTGTTTCT TTGGTTGGAT ATTGCATAGC TGATGGACAG AGGATGTTGG TTTATGAGTT TGTTCCTAAC AAAACTTTGG AATATCATCT TCATGGTTAG ACCACTTAAA AACTTTGAGT ACTAAGTTTA TTTTCTCTAA TCTATATATT CAAGAAAGTT GTAACCTTAA TTTGTTGTTG TAGGGAAAAA TCTTCCGGTA ATGGAGTTCT CCACTAGGTT GCGTATCGCC TTAGGTGCTG CGAAAGGACT CGCTTACCTT CACGAAGACT GTAAGTTTTA ACATTCACCA TTCTCATTTT CTTAACCAAG TTGCATAAAA CAGAGAAAGC TCTGTCTCTG ACTAGTGTTA TCTTTTTGGC TGAGAAAATG GTGCAGGCCA TCCTCGGATC ATTCACCGCG ACATCAAGTC TGCAAATATT CTCTTGGACT TCAACTTTGA TGCTATGGTG ATAAACTAGT AGCTTGCATT CATCTACGGT TTTTTGTTAA GACTACATTG ATGACATTTT GCATTTGTTT ATTCAGGTGG CTGATTTTGG ATTAGCTAAG TTAACATCTG ATAACAACAC TCATGTATCT ACTCGTGTGA TGGGAACTTT CGGGTAAGCG TTTTACCGTA TGATAAGATT GTTCGTGACA CTCAAGAAC ATAACCTTTG TAGACTAATC TACTTTGCTT CTTTCCACAA ACATGTGTAG ATATCTAGCT CCAGAATATG CTTCAAGCGG TAAATTAACC GAGAAATCCG ATGTTTTCTC TTACGGAGTT ATGTTATTGG AACTTATAAC TGGAAAACGA CCGGTTGATA ATAGCATCAC CATGGACGAC ACCTTAGTAG ATTGGGTATT CATGCATGTA ACATATGTAT CGTGTATATA TGTTTTTCGC CTTTTTCGCG TACTAATGAT CATGAATACA GGCTCGGCCT CTTATGGCTC GCGCGCTAGA AGATGGAAAC TTTAATGAGC TCGCAGATGC GAGGCTTGAA GGCAACTACA ACCCGCAAGA AATGGCTCGA ATGGTGACTT GTGCCGCTGC TAGCATTCGT CATTCGGGGC GTAAACGTCC AAAGATGAGC CAGGTGAATC AAAATTATAA CTAAAAGTCT ATTTTTGTCA GAGAATAACA AACAAATGTT GTGGTTTTCA GATAGTAAGA GCGTTAGAAG GAGAAGTGTC CTTAGATGCT TTAAACGAAG GTGTGAAGCC AGGACACAGT AACGTTTACG GGTCATTGGG AGCAAGCTCG GATTATAGTC AGACATCTTA CAATGCAGAC ATGAAGAAAT TCAGACAGAT AGCTTTGTCG AGCCAAGAAT TCCCAGTCAG TGACTGTGAA GGAACATCTA GTAATGATTC TAGAGATATG GGAACTAAGA GCCCTACTCC TCCAAAATGA GATCGAATCA ATGATTCTGT

Figure 12A

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    TCT AGA GAT ATG GGA ACT AAG AGC CCT ACT CCT CCA AAA TGA
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Figure 12B

TCCACCGTTT GAGAAACCCT AATAACAACA TTCAAAATGG CGGACTCACC GGTGGATTCA TCTCCTGCCC CTGAAACCTC AAATGGGACA CCACCGTCAA ACGGAACATC GCCGTCTAAT GAGTCATCGC CGCCAACACC ACCTTCTTCA CCACCACCAT CATCAATATC TGCTCCTCCG CCAGATATCT CCGCTTCTTT TTCACCGCCG CCTGCACCAC CAACGCAAGA AACGTCACCT CCTACATCTC CGTCCTCATC GCCGCCTGTT GTAGCTAATC CGTCACCGCA GACTCCAGAG AATCCTTCTC CACCTGCACC TGAAGGCTCA ACTCCTGTAA CGCCACCTGC ACCACCACAA ACACCGTCGA ACCAATCACC GGAAAGACCA ACTCCTCCTT CTCCTGGTGC CAATGATGAC CGAAACAGAA CCAATGGCGG AAACAACAAC AGAGACGGCT CCACACCATC ACCACCGTCG TCAGGGAACA GAACTTCCGG TGACGGTGGC TCACCTTCAC CACCTCGGTC GATAAGCCCT CCTCAGAATA GTGGAGATTC AGACTCATCA TCGGGTAATC ATCCACAAGC CAACATTGGA TTGATTATTG GAGTCCTTGT AGGAGCAGGG CTTTTGCTTC TACTTGCAGT GTGTATTTGC ATCTGTTGCA ACAGGAAGAA GAAGAAGAAA TCTCCTCAGG TCAACCACAT GCACTACTAC AATAACAATC CTTATGGAGG AGCACCCTCA GGTAATTACA GTTTAGTATA ACTGGAATTT AATTTGTAGC CTAATGGTGT TTGATTAGGT TTCAGAACGA TCATAGTCTA ATGGTTTCTG CTAGCTCCAT ATGGCAAAAG GATTAGATTT ATAAGCTAAA GGAGATGTTG CATAGTGTAG GTAATGGTGG TTATTACAAG GGAACACCTC AAGATCATGT GGTGAATATG GCTGGTCAAG GAGGTGGGAA TTGGGGTCCA CAGCAACCTG TGTCTGGTCC TCACAGTGAT GCTTCCAACT TAACCGGTCG AACTGCTATA CCGTCACCTC AAGCTGCAAC TCTTGGTCAC AACCAAAGCA CTTTCACATA CGATGAACTG TCCATTGCAA CAGAAGGTTT CGCTCAGTCA AATTTGCTAG GACAAGGAGG ATTTGGGTAT GTTCATAAAG GAGTTCTGCC TAGTGGCAAA GAAGTTGCAG TGAAGAGTCT TAAACTTGGA AGTGGACAAG GGGAACGCGA GTTTCAAGCA GAGGTTGATA TCATTAGCCG TGTCCATCAT CGTCATCTCG TTTCTCTTGT TGGATATTGC ATCTCTGGTG GTCAAAGACT TTTGGTTTAT GAGTTTATAC CTAACAACAC TCTTGAATTT CATCTTCATG GTACATTCAT CTAACAGAAT GTTTTCTTGT ATTAACAAAA CCTTTAAGTA TGGTTTCTCT TTAATCAGGA ACATGATTGA AATTTCAGGA AAGGGTCGTC CGGTTTTGGA TTGGCCTACA AGAGTGAAGA TTGCATTGGG ATCAGCTAGA GGCCTTGCAT ATTTGCATGA AGACTGTAAG AAAATCTTTA TCTCACATAT TTGCATCAGT TTCTATCTCG CTCTCTACAA TATTTGAAAG ATTGTATATG TTACATCAAT TATAGGTCAC CCTCGCATTA TCCACAGAGA TATCAAAGCT GCAAACATTC TTCTTGATTT CAGTTTTGAG ACCAAGGTAT GTGTGTATAT ATCGACTCTT GTACTACTTT TACTTTCATT GTCTCTCATT TTTGTTTCCA ATCTGTGTCG ATGTGTGTAT CAGTCTTATT GTGTAAATAT ATGCAGGTGG CAGATTTTGG ATTGGCTAAG CTATCTCAAG ACAACTATAC TCATGTCTCC ACTCGCGTCA TGGGAACTTT TGGGTAAGCA GCTTTGTAAA ATGTCTCAAC TCATCCACAC TTATTTAGTT TCTTTCACTT GTTTTTAACA TTTTCTTGGA TTCAGATACT TAGCTCCAGA GTATGCATCA AGCGGAAAGT TATCCGACAA ATCTGATGTT TTCTCATTTG GAGTAATGCT TCTTGAGCTC ATAACCGGAA GACCTCCTCT GGATCTAACT GGAGAAATGG AAGATAGCTT GGTAGATTGG GTAAGTCGGT CCCCGCCTCT TCGGTTTACT TGTTTAATCC CAAAACACTT TCCAAAGCAA AAACAGAAAC AAATCTTACT ATTGTTGTTG CAGGCAAGGC CTTTGTGTTT GAAAGCAGCT CAAGATGGAG ATTACAACCA ATTGGCTGAT CCACGTCTAG AGCTAAACTA CAGTCATCAA GAGATGGTTC AAATGGCTTC TTGTGCAGCT GCAGCAATCA GACATTCAGC AAGAAGACGG CCTAAGATGA GCCAGGTTCA AAAACTCATA CCACTTGTTG GTTCTATTGT TATATTTTTA CTCACAATTA ATCTTGATGA TAAATGTGAC ATACTAATGA ATCTTGAAAC ATGTGTATGG TAAATGAAAA GATTGTACGA GCACTAGAAG GAGATATGTC AATGGATGAT CTAAGTGAGG GAACAAGACC AGGACAAAGC ACGTACTTGA GCCCCGGGAG CGTGAGCTCA GAGTATGACG CAAGCTCGTA CACGGCAGAC ATGAAAAAAGT TCAAGAAACT GGCGTTAGAG AATAAAGAAT ATCAAAGCAG TGAATATGGT GGAACAAGTG AGTATGGCTT AAACCCTTCT GCTTCAAGTA GTGAAGAAAT GAATAGAGGC TCAATGAAAC GCAATCCTCA GCTTTGAAAG AAGAGACAAC ACTTGTCATA ATATTTCAGT TTTCTTCTCT

Figure 13A

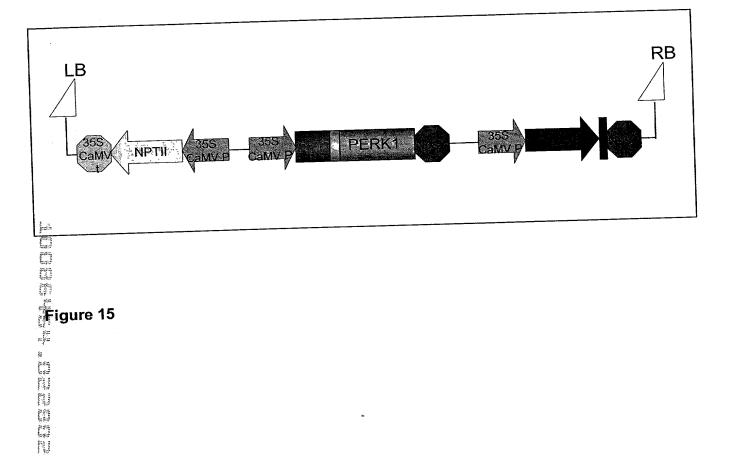
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                                                     RYGTN
2041
     GTG ACC TAT AGC TCT TCT GAA AAC CCG AAT GAC ATC ACA CCA CGG TAT GGA ACA AAT AAG
                                                                            2100
701
     Þ
        R F D T G S S D G Y T S E Y G V N P S
                                                                             720
2101
     AGG AGA TTC GAC ACA GGT TCA AGC GAT GGT TAC ACT TCA GAA TAT GGA GTT AAC CCT TCT
                                                                            2160
721
                                                                             732
                  EHQO
2161 CAG TCG AGC AGT GAA CAT CAA CAG GTG AAT ACT TAG
                                                                            2196
```

Figure 14B



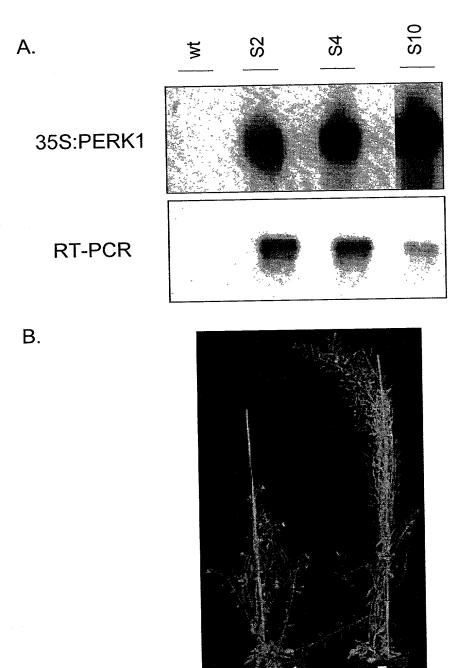
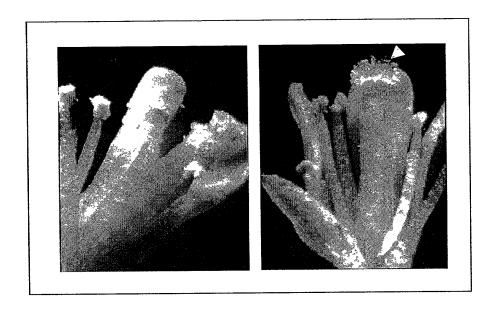


Figure 16



	Wild-type	Overexpressing PERK1 Lines
Average seeds/silique	37	54
Average dry seed weight/plant	60.2 mg	106.2 mg

В.

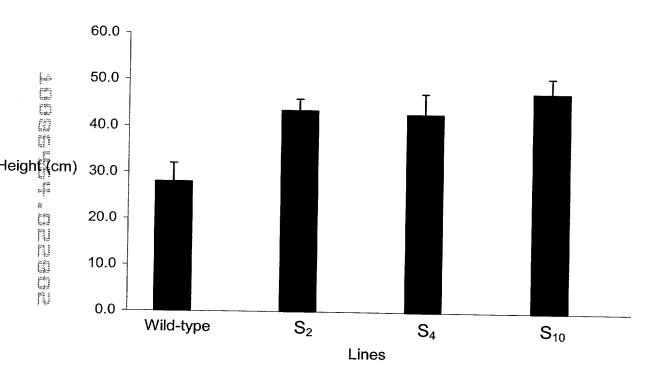


Figure 18

